

Serial No. 10/046,259 April 13, 2004 Reply to the Office Action dated January 21, 2004 Page 5 of 7

## REMARKS/ARGUMENTS

Claims 12-20 are pending in this application. By this Amendment, Applicants AMEND the specification and claims 12-14 and 16-20 and CANCEL claim 11.

Applicants greatly appreciate the Examiner's indication that claims 14 and 15 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims.

Applicant greatly appreciates the Examiner's indication that claims 17 and 18 would be allowable if amended to overcome the 35 U.S.C. § 112, second paragraph rejection and to include all of the features of the base claim and any intervening claims.

The Examiner objected to the Title of the Invention for allegedly containing minor informalities. Applicants have amended the Title of the Invention to correct the minor informalities noted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to the Title of the Invention.

The Examiner objected to claims 17-19 for allegedly containing minor informalities. With respect to claim 18, Applicants have not and do not desire to claim a Markush group. Claim 18, as originally presented, clearly recites that the second metallic thin film includes a metal that contains Au, α-tantalum, β-tantalum, W, Ag, Mo, Cu, Ni, Fe, Cr or Zr as a principal component. Applicants are aware of no reason why claim 18, as originally presented, would be unclear. Applicants have amended claims 17-19 to correct the other minor informalities noted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to claims 17-19.

Claim 20 was rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Claim 20 has been amended to correct the informalities noted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 20 under 35 U.S.C. § 112, second paragraph.

Claims 11, 12, 16, 19, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Colgan et al. (U.S. Patent 5,281,485) in view of Fujimoto et al. (U.S.



Serial No. 10/046,259 April 13, 2004 Reply to the Office Action dated January 21, 2004 Page 6 of 7

Patent 6,088,462). Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Colgan et al. in view of Fujimoto et al. and further in view of Kimura et al. (U.S. Patent 5,929,723). Applicant has canceled claim 11. Applicants respectfully traverse the rejection of claims 12, 13, 16, 19, and 20.

Claim 16 has been amended to recite:

"A method for manufacturing a surface acoustic wave device comprising:

providing a piezoelectric plate;

forming a first metallic thin film on the piezoelectric plate; and forming a second metallic thin film on the first metallic thin film, the second metallic film including tantalum as a principal component and at least one portion of the tantalum of the second metallic thin film is  $\alpha$ -tantalum; wherein

at least one portion of the first metallic thin film includes titanium." (emphasis added)

Applicants' claim 16 recites the feature of "at least one portion of the first metallic thin film includes titanium." With the improved features of claim 16, Applicants have been able to produce a surface acoustic wave device having an interdigital electrode including tantalum, wherein an adhesive property of the interdigital electrode for adhering to the piezoelectric plate is excellent, the cost and resistivity of the interdigital electrode is greatly reduced, and the insertion loss is greatly improved. (see, for example, the second full paragraph on page 4 of the originally filed Specification).

Applicants have amended claim 16 to be in independent form. The Examiner has alleged in the second paragraph of page 5 of the outstanding Office Action that "Colgan et al. teaches that the first metallic thin film includes a [sic] tantalum as shown in Fig. 1B." First, Applicants respectfully submit that the Examiner has inadvertently confused the feature of "titanium" recited in Applicants' claim 16 with "tantalum." Second, Applicants respectfully submit Colgan et al. and Fujimoto et al. fail to teach or suggest the use of any titanium, and certainly fail to teach or suggest the use of titanium in a first metallic thin film. Thus, Applicants respectfully submit that neither Colgan et al.



**KEATING & BENNETT** 

Serial No. 10/046,259 April 13, 2004 Reply to the Office Action dated January 21, 2004 Page 7 of 7

nor Fujimoto et al. teach or suggest the feature of "at least one portion of the first metallic thin film includes titanium as recited in Applicants' claim 16.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Colgan et al. in view of Fujimoto et al.

Accordingly, Applicants respectfully submit that none of the prior art of record, applied alone or in combination, teaches or suggests the unique combination and arrangement of elements recited in claim 16 of the present application. Claims 12-15 and 17-20 depend upon claim 16 and are therefore allowable for at least the reasons that claim 16 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted.

Date: April 13, 2004

Attorneys for Applicants

Joseph R. Keating Registration No. 37,368

Christopher A. Bennett Registration No. 46,710

**KEATING & BENNETT LLP** 

10400 Eaton Place, Suite 312

Fairfax, VA 22030

Telephone: (703) 385-5200 Facsimile: (703) 385-5080